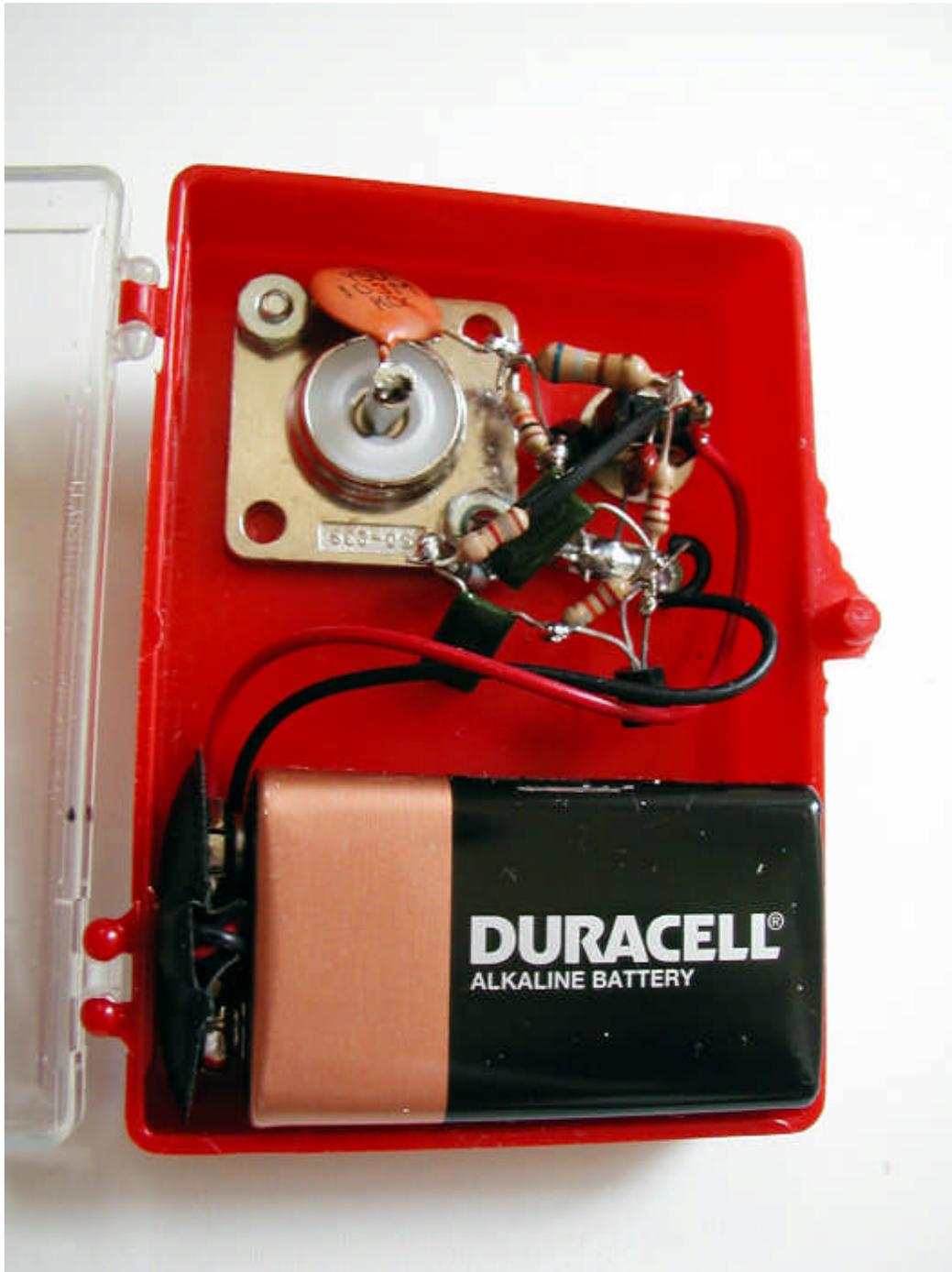


# A SIMPLE HF-BAND NOISE GENERATOR

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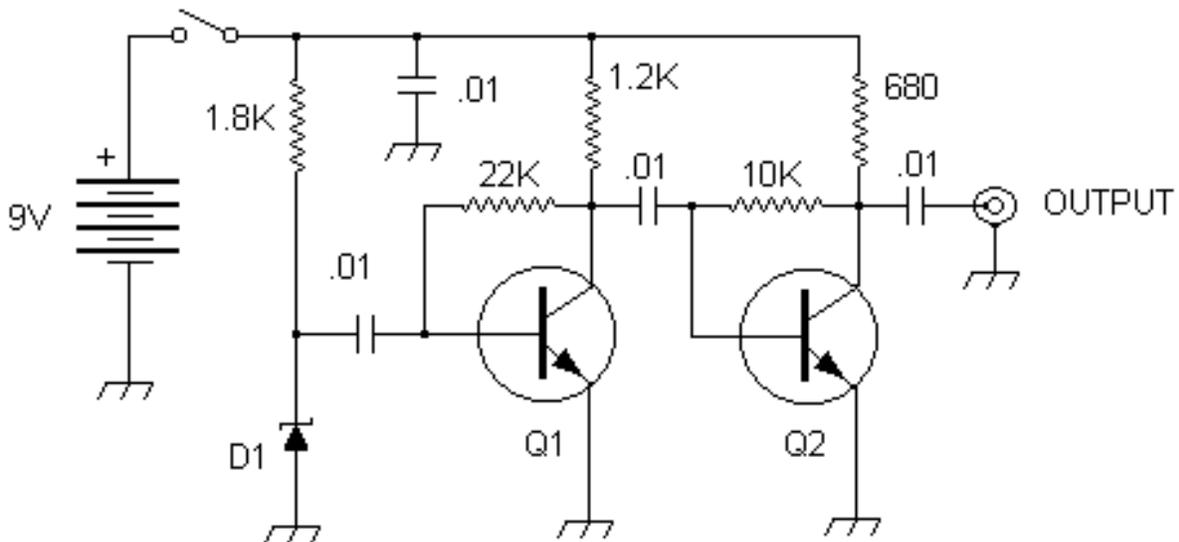
The simple generator is based on a circuit provided by Tom Hammond, N0SS. It is housed in a 3 in X 2 in X 3/4- in (75mm x 52 mm X 20 mm) plastic box.. The only operating control is the On/Off switch.



Simple point-to-point wiring is used. No printed circuit board is required. Short, direct leads produce the best noise spectrum. Unwanted capacitance to a ground plane or excessive lead lengths will produce an uneven noise spectrum and limit the upper frequency of useful noise. This generator produces good noise throughout the HF spectrum and into the lower VHF range.

The battery is securely held in place by friction when the cover is closed.

## HF NOISE GENERATOR

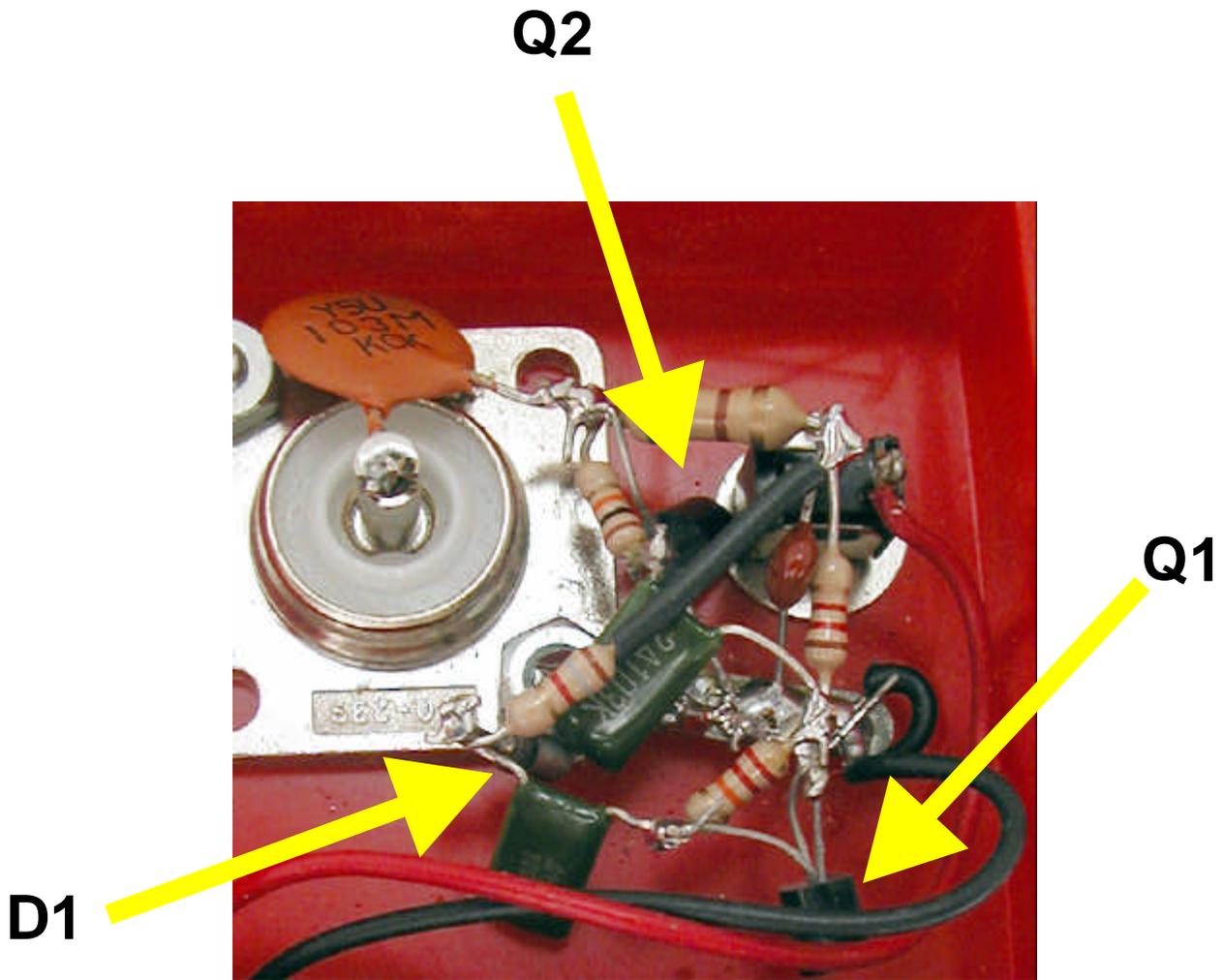


D1 = 6.8 V 1 Watt Zener Diode  
Q1, Q2 = 2N2222 or equal.

Capacitor Values in ufd  
Resistor Values in ohms  
Resistors 1/4 watt.

The Zener diode, D1, generates the noise as current from the 1.8k-ohm resistor flows through it. Q1 and Q2 are simply wide-band amplifiers.

You can substitute a different value Zener for D1, but you will have to experiment with the value of the 1.8 k resistor to get the best noise output. Of course, you must use a zener with a low enough voltage rating to work with the 9-volt battery.



This closeup shows the major component placement. The long solder lug under one mounting screw for the SO-239 connector is the common ground tie point.

One side of the on/off switch provides the common +9v tie point in the upper right corner of the image.

The Zener diode, D1 is hard to see in the picture because only one end of it is visible where it connects to the 1.8 k resistor (brown, grey, red). A scrap of stripped insulation was slipped over the resistor lead where it crosses other circuit elements to reach the +9V tie point.

There's absolutely no reason to duplicate this layout exactly. Build the unit into whatever enclosure you have on hand, or lay it out "ugly bug" style on a scrap of printed circuit board material. If you use a metal enclosure or circuit board material, avoid having parts and leads too close to the grounded surfaces to avoid unwanted capacitive coupling to ground.